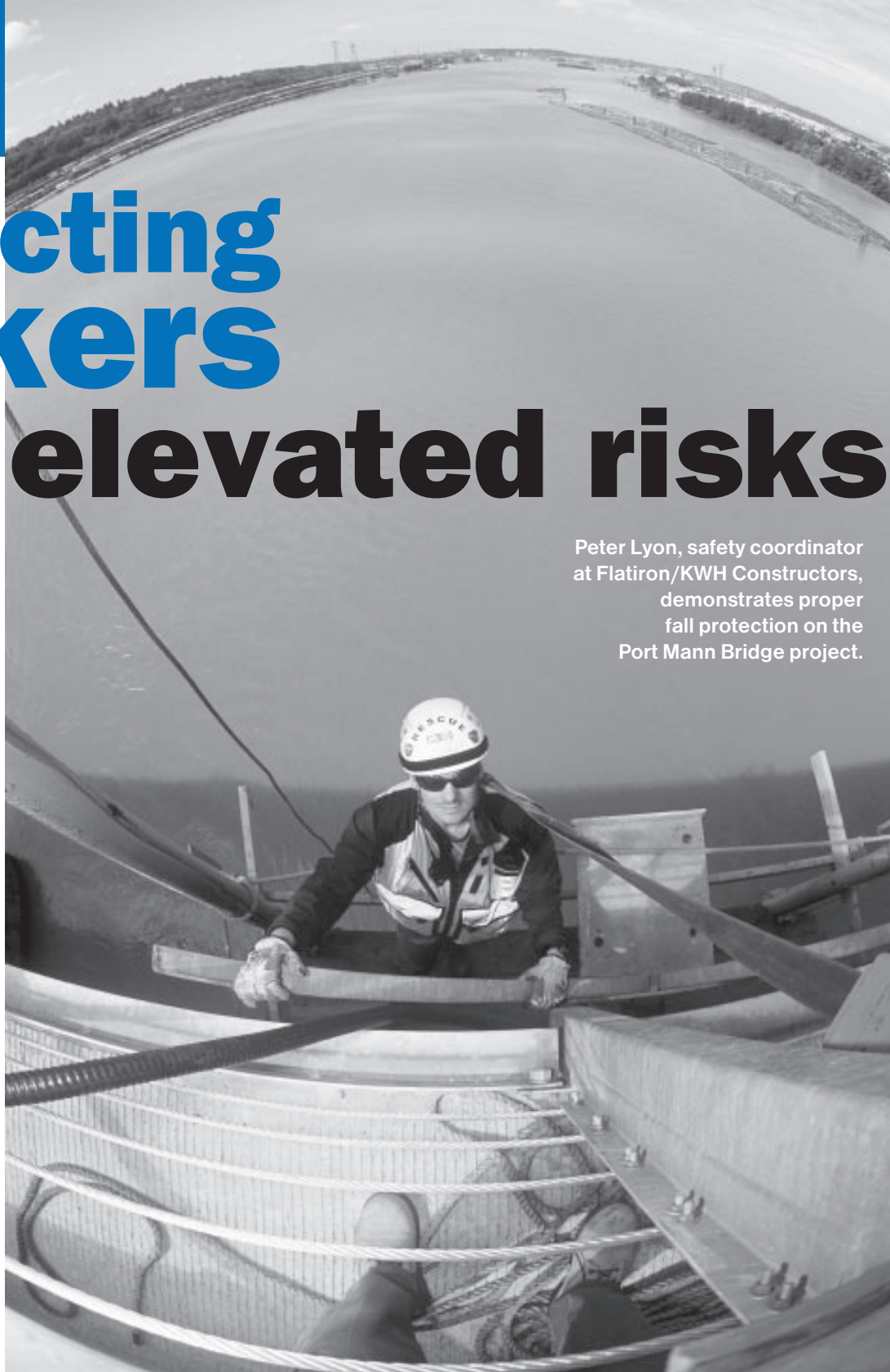


Protecting workers from elevated risks

By Ian Gray

Peter Lyon, safety coordinator at Flatiron/KWH Constructors, demonstrates proper fall protection on the Port Mann Bridge project.



Between 1989 and 1999 there were 118 fatalities in B.C. workplaces caused by falls from elevation.

Fifty-three of these were in construction, the other 65 from all other industries combined. In addition, there were tens-of-thousands of serious injuries resulting from elevated falls, including fractures, contusions, concussions, and damage to internal organs.

Although falling from elevation is a dangerous hazard for many B.C. workers, in most cases it can be easily prevented. That's why the fall protection requirements contained within B.C.'s Occupational

Health and Safety Regulation are so important. They provide minimum requirements for employers and workers, which if followed correctly, can greatly reduce the risk of injury or death from falls.

According to the Regulation, fall protection must be used wherever a worker is at risk of falling three metres (10 feet) or more, or where



a fall from a lesser height may result in serious injury. In addition, before a worker begins a job, he or she must be thoroughly trained in the safe use of the fall protection equipment they will be using.

When work involves heights above 7.3 metres (25 feet), employers are required to have a written fall protection plan, detailing fall hazards; the systems in place to minimize those hazards; the procedures for using, maintaining, and inspecting fall protection equipment; and the procedures for rescue if a worker has fallen and is suspended by a personal fall protection system or safety net.

Fall protection methods

Maximum fall protection is always recommended. However, when that isn't possible, the Regulation provides for other kinds of fall protection. Depending on the situation, one or more of the following methods must be employed:

- **Guardrails or barricades** should be installed, whenever possible, to prevent workers from falling.
- **Fall restraint systems** such as work positioning devices that prevent workers from travelling to the edge of the building or structure must be provided if the use of guardrails or barricades isn't practical.
- **Fall arrest systems** must be used whenever fall prevention isn't possible. Fall arrest systems stop workers in mid-fall, preventing them from hitting the surface below. Examples include safety nets and full body harnesses attached by lifelines to secure anchors.
- **Control zones**, which involve setting boundary lines at a safe distance from unguarded edges, can be used in certain cases. A safety monitor may be required to ensure that workers stay within the control zone.
- **Other WCB-approved fall protection systems** may also be used under the Regulation.

Inspection and maintenance

Employers need to ensure that their fall protection equipment meets the standards prescribed by the Regulation. Also, all personal fall protection equipment should be inspected by a qualified person *before* each workshift and maintained in good working order.

- All equipment should be kept free from substances or conditions that could contribute to deterioration.
- Any device that is defective in condition or function must be removed from service immediately.
- After a fall, all equipment used in the fall arrest must be removed from service and not returned until it has been inspected and approved by the manufacturer or other approved agent, or by a professional engineer. Harnesses/lanyards must be destroyed.

Fall protection in action

The proper use of fall protection equipment can reduce the risk of injury and save lives. Just ask Dave Williams, an electrician working with Flatiron/KWH Constructors on the Port Mann Bridge renovations.

On April 10, 2001, Dave was assisting in the installation of fibreglass pipe when he lost his footing and fell headfirst over the side of the bridge deck. Fortunately, he was using his fall protection equipment and fell only 2.4 metres (8 feet) instead of 33 metres (110 feet) to the ground. Co-workers were able to pull him back up to the bridge deck and, except for a few minor abrasions, Dave was unharmed and able to return to work the next day.

Veer Singh, WCB safety officer, investigated the incident and says that it demonstrates the importance of fall protection. "There's no question that it saved his life, but if Dave had been using the fall protection equipment in fall restraint rather than in arrest, he would not have fallen over the edge in the first place. Hopefully others will learn from this experience and take steps to optimize their fall protection, ensuring that it is used correctly and whenever necessary."

Resources

The WCB's fall protection requirements can be found in Part 11 of the Occupational Health and Safety Regulation. Other WCB resources include the booklet *An Introduction to Personal Fall Protection Equipment*, and the videos *Fall Protection* and *The Safety Monitor System*, which are available from WCB Publications and Videos, by e-mail at pubvid@wcb.bc.ca, fax 604 279-7406, or phone 604 276-3068 (toll-free in B.C. 1 800 661-2112, local 3068).

For more information, contact your WCB occupational safety officer or call the Prevention Information Line at 604 276-3100 (toll-free in B.C. at 1 888 621-SAFE, local 7233).

